ECONOMIC GROWTH & ITS DETERMINANTS: WILL THE REFORMS SPEED GROWTH IN INDIA

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Abstract

In the last few decade lots has been done and discussed with respect to the factors that determine economic growth and the reforms necessary to speed the growth rate. There are the theories that have pointed out the various factors that plays important role in the growth rate of the country. Neoclassical theories of growth based on the Solow's growth model has emphasised on investment whereas the other theories have pointed out human capital, innovation as the main driver of growth. There are the theories that have pointed out international trade, foreign investment, technology etc. as the factor that also determine the growth rate. Not only this theories also pointed out non-economic factors that play significant role in pushing the growth rate of which legal, political, socio-cultural factors, demography are the important factors.

India being a developing economy, large number of reforms are required for pushing the growth rate. These reforms had to be diverse covering almost all the sector of the economy with more emphasis on the sector that had more potential of growth.

This paper tries to find out the sectors that have contributed most to the growth rate of the economy for the period 1991-2012. Importance of the sector to the economy will be measured from its contribution to the overall GDP, employment, importance in foreign trade. Secondly variables such as inflation, budgetary deficits, current account deficit, and foreign exchange reserves will be related with the growth rate. Finally the paper will pinpoint the sector/areas that had the potential of promoting the economic growth and reforms required. This paper is based on the secondary data whether print/online. Major source of information are the economic surveys and RBI handbook of Indian Statistics. Study covers the period from 1991-2012 and the decadal changes in the sectors/factors will be taken into consideration.

Keywords: Economics Growth, Developing, Reforms, GDP, Sectors.

Introduction

In the last two decades lot has been done and discussed for finding out the factors that promote economic growth of the country. What came to the forefront that growth is not one dimensional but a multidimensional and for achieving there has to be the overall growth of the sectors and the burden of growth should not be on single sector. Overall growth of the nation is the result of the growth in primary, secondary and tertiary sector. What has been seen in a country like India due to its large dependency on agriculture primary sector plays important role in achieving higher growth. But when this sector fails then the growth is not pushed up by other factors. Apart from growth in these sectors, economic growth is also affected by the macro economic variables such as inflation, fiscal deficit etc to a great extent. In recent times new factors such as foreign direct investment, foreign reserves, current account deficit etc are also viewed as the factor that promote the growth rate of the nation.

Since 2003-04 India's growth story is quite impressive with the year of high growth rate of 9.57% for 2006-07, the average growth rate has been around 8% and because of higher growth rate India is termed as one of the fastest growing economy in the world after China. Major contribution is made by industrial and service sector. Although whenever there is low growth in agriculture it always pulls down the overall growth rate but the opposite does not hold true.

Literature Review

Despite the lack of a unifying theory, there are several partial theories that discuss the role of various factors in determining economic growth. Two main strands can be distinguished: the neoclassical, based on Solow's growth model, has emphasised the importance of investment and, the more recent, theory of endogenous growth developed by Romer and Lucas has drawn attention to human capital and innovation capacity.

Furthermore, important contributions on economic growth have been provided by Myrdal's cumulative causation theory, and by the New Economic Geography school. In addition, other explanations have highlighted the significant role non-economic (in the conventional sense) factors play on economic performance. These developments gave rise to a discussion that distinguishes between 'proximate' and 'fundamental' (or 'ultimate') sources of growth. The former refers to issues such as accumulation of capital, labour and technology while the latter to institutions, legal and political systems, socio-cultural factors, demography and geography.

Theoretical developments have been accompanied by a growing number of empirical studies. Initially, research focused on the issue of economic convergence/divergence since this could provide a test of validity between the main growth theories (i.e. the neoclassical and the endogenous growth theory). Eventually, focus shifted to factors determining economic growth. Seminal studies in this field are conducted by Kormendi and Meguire (1985), Grier and Tullock (1989) and, especially, Barro (1991).

Theoretical Perspectives
The starting point of conventional economic growth theorisation is the neoclassical model of Solow (1956). The model highlights the savings or investment ratio as important determinant of short-run economic growth. Technological progress, though important in the long-run, is regarded as exogenous to the economic system and therefore it is not adequately examined by this model. Turning to the issue of convergence/divergence, the model predicts convergence in growth rates on the basis that poor economies will grow faster compared to rich ones.
The role of technological progress as a key driver of long–run economic growth has been put in scrutiny from more recent studies, which accept constant and increasing returns to capital. These theories, known as endogenous growth theories, propose that the introduction of new accumulation factors, such as knowledge, innovation, etc., will induce self-maintained economic growth. Triggered by Romer's (1986) and Lucas' (1988) seminal studies, work within this framework highlighted three significant sources of growth: new knowledge (Romer, 1990, Grossman and Helpman, 1991), innovation (Aghion and Howitt, 1992) and public infrastructure (Barro, 1990). As a result, and in contrast to the neoclassic counterpart, policies are deemed to play a substantial role in advancing growth on a long-run basis. Turning to the convergence/divergence debate, the
Another strand of literature, perhaps less influential, is the growth theory of cumulative causation developed by Myrdal (1957) and Kaldor (1970). Essential to this theory is the argument of 'cumulative causation' in which initial conditions determine economic growth of places in a self-sustained and incremental way. As a result, the emergence of economic inequalities among economies is the most possible outcome. Although there are centrifugal effects (positive spillovers) spreading growth from the more to the less advanced economies, they are incapable of bringing the system into a state of balance if market forces alone are left at work. In other words, economic policy has to come into play to correct those imbalances. In contrast to theories mentioned above, theories of cumulative causation has a medium term view and often described as "soft" development theories due to a lack of applied mathematical rigour (Plummer and Taylor, 2001). However, certain similarities are evident between the cumulative causation approach and the theory of endogenous growth.

From a more macro perspective, other theoretical approached have emphasised the significant role non-economic factors (at least in the conventional sense) play on economic performance. Thus, institutional economics has underlined the substantial role of institutions (Matthews, 1986; North, 1990; Jutting, 2003), economic sociology stressed the importance of socio-cultural factors (Granovetter, 1985; Knack and Keefer, 1997), political science focused its explanation on political determinants (Lipset, 1959; Brunetti, 1997) and others shed light on role played by geography (Gallup *et al.*, 1999) and demography (Brander and Dowrick, 1994; Kalemli-Ozcan, 2002). Investment is the most fundamental determinant of economic growth identified by both neoclassical and endogenous growth models. However, in the neoclassical model investment has impact on the transitional period, while the endogenous growth models argue for more permanent effects. The importance attached to investment by these theories has led to an enormous amount of empirical studies examining the relationship between investment and economic growth (see for instance, Kormendi and Meguire, 1985; De Long and Summers, 1991; Levine and Renelt, 1992; Mankiw, 1992; Auerbach et al, 1994; Barro and Sala-I- Martin, 1995; Sala-i-Martin, 1997; Easterly, 1997; Bond et al, 2001; Podrecca and Carmeci, 2001). Nevertheless, findings are not conclusive.

Economic policies and macroeconomic conditions have, also, attracted much attention as determinants of economic performance (see Kormendi and Meguire, 1985; Grierand and Tullock, 1989; Barro, 1991, 1997; Fischer, 1993; Easterly and Rebelo, 1993; Barro and Sala-i-Martin, 1995) since they can set the framework within which economic growth takes place. Economic policies can influence several aspects of an economy through investment in human capital and infrastructure, improvement of political and legal institutions and so on (although there is disagreement in terms of which policies are more conductive to growth). Macroeconomic conditions are regarded as necessary but not sufficient conditions for economic growth (Fischer, 1993). In general, a stable macroeconomic environment may favour growth, especially, through reduction of uncertainty, whereas macroeconomic instability may have a negative impact on growth through its effects on productivity and investment (e.g higher risk). Several macroeconomic factors with impact on growth have been identified in the literature, but considerable attention has been placed on inflation, fiscal policy, budget deficits and tax burdens.

Openness to trade has been used extensively in the economic growth literature as a major determinant of growth performance. There are sound theoretical reasons for believing that there is a strong and positive link between openness and growth. Openness affects economic growth through several channels such as exploitation of comparative advantage, technology transfer and diffusion of knowledge, increasing scale economies and exposure to competition. Openness is usually measured by the ratio of exports to GDP. There is a substantial and growing empirical literature investigating the relationship between openness and growth. On the one hand, a large part of the literature has found that economies that are more open to trade and capital flows have higher GDP per capita and grew faster (Dollar, 1992, Sachs and Warner, 1995, Edwards, 1998, Dollar and Kraay, 2000). On the other hand, several scholars have criticized the robustness of these findings especially on methodological and measurement grounds (see for example, Levine and Renelt, 1992; Rodriguez and Rodrik, 1999; Vamvakidis, 2002).

Foreign Direct Investment (FDI) has recently played a crucial role of internationalising economic activity and it is a primary source of technology transfer and economic growth. This major role is stressed in several models of endogenous growth theory. The empirical literature examining the impact of FDI on growth has provided more-or-less consistent findings affirming a significant positive link between the two (e.g. Borensztein et al, 1998; Hermes and Lensink, 2000; Lensink and Morrissey, 2006).

Objectives
1. To find out the sectors that has contributed most to the growth rate of the economy for the period 1991-2012.
2. Importance of the sectors to the economy, in terms of the contribution to the overall GDP, employment, importance in foreign trade.
3. Relationship between inflation, budgetary deficits, current account deficit, foreign exchange reserves and the growth rate.
4. Finding out the sector/areas that had the potential of promoting the economic growth and reforms required.

Methodology
This paper is based on the secondary data whether print/online. Major source of information are the economic surveys and RBI handbook of Indian Statistics. Study covers the period from 1991-2012 and the decadal changes in the sectors/factors have been taken into consideration.
For analysing the data simple statistical tools such as correlation and regression have been used. Presentation is done through line plots, pie charts and bar graph.

Data Analysis & Results
Table 1.1 shows the share by economic activity in the total GDP. Analysis shows the result since the independence of the country and shows the results of the last five decade. As clearly shown the share of

agriculture & allied (53.15) which had the dominant share in the GDP followed by service (35.48) and industry (11.37). Over the period of study drastic change took place and as a result in 2011 share of Agriculture & Allied (14.51) came down and as a result the share of industry and services has increased and the major change occurred in the share (19.95) of service sector (65.54).

Taking into account the share of sub-activities it can be seen that the share of agriculture in total agriculture and allied GDP has increased from 80.63% in 1951 to 85.03% in 2011. In industrial sector major change occurred in the share of electricity, gas and water supply. In service sector major contribution has been made by trade and hotel services.

Analysis of the last two decades (1991-2011) shows that there is a sharp fall in the share of agriculture and allied by 15% (29.62 in 1991 to 14.51 in 2011), whereas the share of industry did not change very much. Except for manufacturing other such as mining & quarrying and electricity, gas and water supply have shown decrease in their share in industrial GDP. On the other hand the major change was in service sector contribution towards GDP which increased from 49.76% to 65.545 for the same period. In service sector except community & social and personal services all other services have shown increase in their share in service GDP.

Table 1.2 shows the share of the sectors in the total employment of the country. As in the case of GDP share of agriculture and allied activities activities came down, same thing happen in terms of share of agriculture & allied in total employment. For the period (1999-2005 to 2004-05) share of this sector was 59.9 % which came down to 52.9 %(2004-05 to 2009-10), whereas industry sector share in employment has decreased by little from 11.1% to 10.5. on the other hand share of non manufacturing has increased from 5.3% to 12.2% for the same period whereas service sector share increased a bit 23.7% to 24.4%. Therefore major changes occurred in the non manufacturing share in total employment.

Table 1.3(a) shows the result of test of correlation and r-square value between GDP and GDP (Agriculture, Industry and Service Sector). Although the results are positive for all the sectors but difference is in the extent to which one affects the value of the other and it can be seen that service GDP is highly related with GDP and the value of r-square if 50.74%, other are also positive but the relation is that of low degree of positive correlation.
Table 1.3 (b) show the result of test of correlation value along with the value of r-square. As expected the result are in consonance with the hypothesis. It can be seen that fiscal deficit and CAD are negatively correlated and fiscal deficit is highly negative correlated.

Table 1.4 shows the compound annual growth rate (CGAR) for the last seven decade. Look at the table reveals that not much significant change took place with respect to the growth rate in agriculture & allied sector and industrial sector over the period of study. But once service sector is taken into consideration there has been a significant growth rate. Agriculture and allied CAGR has been around 3%, industrial growth rate around 6% and services around 7% if last three decades are considered.

Taking into account the CAGR of the last two decades, it can be seen that tremendous growth has been registered by in industrial sector (5.7% to 7.2%) and service sector (7.2% to 9.1%), whereas agriculture and allied (2.8% to 3.1%)there is slight change in growth rate.

Table 1.5 shows the sector wise share in total exports. It can be seen that the share of agriculture and industry has came down whereas that of services has improved a lot. With the share of around 12% in 1991 share of agriculture and allied activities constantly fell down and for the year 2012 it was 7.07%, industry share came down from 50% to 35% and that of services increased from 17.54% to 26.90 for the same period.

Future Prospects and Challenges
Indian being an agricultural economy where more than 50% of the population depends on agriculture and contributes 14.45% towards GDP its importance cannot be ignored. What has been seen that whenever there is the

fall in agriculture GDP, it directly pull down the overall GDP i.e. agriculture GDP has the tendency of pulling down the GDP but does not push it up at the times of higher growth rate.

Taking into account the growth of industrial sub sectors it can be seen that manufacturing sector is playing an important role in pulling up the growth rate of this sector followed by electricity, gas and water supply and mining and quarrying.

Overall it is the service sector that has always pulled up the GDP and had the huge potential all the sub sectors have registered the CAGR of above 9% in the last decade. But the major drawback is with respect to the employment potential that this sector has. This sector cannot be substitute for agriculture sector.

On the employment from not much change had taken place. Share of agriculture in employment had slightly came down from 59.9% to 52.9% by not much has improved on industry and service sector. In industry sector much potential has come out in construction sector with its share increasing from 4.4% to 11.3%. Major increased in share is seen in non-manufacturing sector with the potential of providing employment in trade, transport. On service sector front not much has changed.

On the trade front India's ranking has improved and share in total trade with the world has been growing the major area of concern has been the falling share of agriculture and allied products and manufactured goods in total exports. Share of all the products in total agriculture exports have come down with improvement in sugar meat and cotton, marines products have shown the maximum fall. Indian exports are mainly affected by technical barriers to trade, sanitary and phytosanitary measure and rules of origin.

In case of manufactured exports major decrees has been seen in leather , chemical, textiles and handicrafts with improvement in chemicals, engineering and gems and jewellery because of non-competitive nature of goods india has lost most of the markets.

In case of service exports all the services travel, transport, insurance have come down with respect to the share in total exports with rising share of miscellaneous services-software, business , financial and communication. Except for communication services all other have shown remarkable improvement.

With respect to the macro economic variables much has to be done as they indirectly affects the growth rate of the nation. Current account deficit which shows the different between exports and imports has been negative except for 2001-02 to 2003-04. This is generally due to increased exports. During the same period because of positive CAD there was increase in the reserves and the all-time high reserves of 15.90 US $ million was reached. Another area where lot has to be done is reducing the fiscal deficit of the central government and having low rate of inflation.

Conclusion

Thus from the above study it can be seen that although agriculture sector has lost its charm in terms of its contribution to GDP, foreign trade but still it's an important sector which provides employment to millions of peoples.

Industrial sector contribution to GDP has increased but there are inter industry differential with more contribution coming from the electricity, gas and water supply. Although service sector share in GDP has increased but this sector is not employment oriented and cannot be considered as a substitute for agriculture.

On macroeconomic front government must reduce its fiscal deficit with low level of inflation which is enough to boost the economy. International reserves directly affected by the CAD therefore it must be brought down. This can only be achieved if we boost up our exports. There is the need of overall proper implementation and monitoring of the policies.

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Surveys & Reports

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Table 1.1: Share by Activity in GDP							
Year	1950-51	1960-61	1970-71	1980-81	1990-91	2000-01	2010-11
Agriculture & Allied Activities	**53.15**	**48.66**	**42.28**	**36.06**	**29.62**	**22.31**	**14.51**
Agriculture	80.63	82.72	81.99	83.54	84.47	84.06	85.03
Industry	**11.37**	**13.97**	**16.21**	**18.23**	**20.63**	**20.69**	**19.95**
Mining & Quarrying	16.56	15.78	13.76	14.50	16.92	14.33	11.23
Manufacturing	80.89	80.43	79.72	77.29	73.35	74.93	79.44
Electricity, gas & Water Supply	2.55	3.79	6.52	8.21	9.73	10.74	9.33
Services	**35.48**	**37.38**	**41.51**	**45.71**	**49.76**	**57.00**	**65.54**
Construction	14.72	17.51	18.69	16.81	14.24	11.64	12.00
Trade, Hotel	31.80	34.55	34.90	37.05	35.55	37.95	41.55
Finance	24.09	20.81	18.13	18.00	23.21	24.66	26.54
Community, Social & Personal Services	29.40	27.13	28.28	28.13	27.00	25.76	19.91
Source: CSO							

Table 1.2: Share in employment by Activity				
Sectors	**Share of Employment & GVA**			
	1999-2000 to 2004-05		**2004-05 to 2009-10**	
	Employment	**GVA**	**Employment**	**GVA**
Agriculture	**59.9**	**23.8**	**52.9**	**19**
Manufacturing	**11.1**	**15.5**	**10.5**	**15.3**
Mining & quarrying	**0.5**	**3.1**	**0.6**	**2.9**
Electricity, gas & water supply	**0.3**	**2.3**	**0.3**	**2.1**
Construction	**4.4**	**6.4**	**11.3**	**7.7**
Non manufacturing	**5.3**	**11.8**	**12.2**	**12.7**
Trade	**9.2**	**12.4**	**9.1**	**14.6**
Hotels & restaurants	**1.2**	**1.2**	**1.3**	**1.5**
Transport, storage & communication	**3.7**	**7.1**	**4.2**	**8.4**
Banking (& insurance)	**0.6**	**6.2**	**0.8**	**5.8**
Real estate	**0.7**	**7.5**	**1.3**	**9**
Public administration & defence	**2.6**	**6.8**	**2.0**	**5.9**
Education	**2.1**	**3.8**	**2.4**	**3.9**
Health	**0.7**	**1.5**	**0.7**	**1.8**
Other community, social & personal services	**2.5**	**2.1**	**1.8**	**8.0**
Other services	**0.5**	**0.2**	**0.8**	**1.8**
Services	**23.7**	**48.9**	**24.4**	**53**
Total	**100**	**100**	**100**	**100**

Table 1.3(a): Value of r and r square			
	AGDP	IGDP	SGDP
R	0.600164	0.661248	0.712373
R^2	0.360196	0.437249	0.507475

Table 1.3(b): Test of Correlation and value of r-square						
	S-I Gap	Fiscal Deficit	WPI	M3	Reserves	CAD
R	0.08	-0.51	0.01	0.42	0.33	-0.03
r-square	0.01	0.26	0.00	0.18	0.11	0.00
Source: Own Calculation from Table 1.4						

Table 1.4: CAGR by Activity						
Activity/Year	**1951-60**	**1961-70**	**1971-80**	**1981-90**	**1991-00**	**2001-11**
Agriculture & Allied Activities	0.030	0.023	0.015	0.034	**0.028**	**0.031**
Industry	0.061	0.053	0.043	0.068	**0.057**	**0.072**
Services	0.045	0.049	0.041	0.063	**0.072**	**0.091**
GDP	0.039	0.038	0.031	0.054	**0.057**	**0.076**

Table 1.5: Share in Total Exports by activity

Year/ Commodity	Agriculture	Manufacturing	Services
1991	0.129309	0.500998	0.175437
1992	0.115331	0.473509	0.180856
1993	0.111187	0.497777	0.167713
1994	0.118449	0.489874	0.154814
1995	0.099651	0.481134	0.144663
1996	0.121701	0.475187	0.146956
1997	0.123568	0.443181	0.134575
1998	0.112453	0.450523	0.16002
1999	0.100461	0.429372	0.219518
2000	0.082648	0.437917	0.231512
2001	0.076856	0.441786	0.209318
2002	0.072461	0.409746	0.210462
2003	0.070116	0.420532	0.216962
2004	0.062884	0.404799	0.224287
2005	0.054768	0.392472	0.279496
2006	0.052422	0.372424	0.295932
2007	0.052099	0.348826	0.303065
2008	0.058508	0.326878	0.286766
2009	0.049142	0.345129	0.296965
2010	0.051274	0.333015	0.277689
2011	0.053949	0.352102	0.296134
2012	0.070738	0.353087	0.269044

Source: Handbook of Indian Statistics